Research Article

Evaluation of Virtual Hang-Gliding Applications in Terms of Tourism with Swot Analysis

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ABSTRACT

With the development of the internet, many internet users have the opportunity to access a different world. Thanks to the fact that users can access virtual tours outside their environment. Through virtual reality entertainment can be arranged many activities such as design and simulation Guttentag.

The purpose of study of the people with the development of technology in their lives especially one of the sports of aviation activities in the entertainment field of virtual reality and applications that are used to evaluate the use of hang-gliding activities in terms of tourism.

This study examines the use of virtual hang-gliding flights as a substitute tourism application in tourism. Some basic problems and problems related to the integration of this application with tourism are analyzed and some suggestions are made for future applications regarding the use of VR in tourism.

In this study, we searched the literature review in this area through Google scholar, Scopus and online sources and the SWOT analysis was made by evaluating the collected information. The purpose of using SWOT analysis in the study is to evaluate the advantages and disadvantages of these applications in terms of tourism by evaluating the studies and applications related to virtual hang-gliding. Another aim is to determine how strengths can be developed through opportunities and how threats that can affect weaknesses can be eliminated.

As a result, even if this technology is perceived as a threat, it is concluded that it is an effective promotion and marketing tool for tourism.

Keywords: Hang-gliding; Virtual Reality; Tourism Activities

INTRODUCTION

Virtual Hang-gliding Application (VHA)

Hang-gliding is one of the leisure time methods that are used sporty. Hang-gliding (delta wing) flight, which is one of the general aviation activities, is carried out by single-seater aircraft that can move thanks to wind movements. Although it is similar to paragliding sports in general, a long-term training phase is needed in order to carry out a safe flight [1].

Sailing wing is a sport in many touristic nature it is possible for two people to do it at the same time. The places where this sport is performed most in the world [2];

- Haw Kitty Hawk, North Carolina, USA,
- De Rio de Janeiro, Brazil,
- Lak Interlaken District, Switzerland
- Ulu Kahului, Hawaii, USA,
- Jol La Jolla, California, USA,
- Fethiye, Turkey,
- Torre La Torre, Valle de Bravo, Mexico,
- Lake Salt Lake City, Utah, USA,
- Ies Magaliesburg, Johannesburg, South Africa,
- Town Queenstown, New Zealand.

Demos and applications of Virtual Reality, both in the form of computer animation and creating 360-degree virtual environments in the game and entertainment industry, attract more and more people. Although it is used in many areas in terms of tourism,

it does not receive the expected interest and participation from consumers [3]. Reasons for this include the need to use VR-glasses and headsets to use this technology, or the fact that VR pushes users financially.

The attraction of virtual reality in terms of tourism is provided by the applications of devices such as Samsung Gear VR or HTC Vive offered to users [4]. Tussyadiah et al. [5] say that VR's desire of tourists to experience new places without leaving their environment and aesthetic VR experiences increase the tourist attraction of touristic places.

In hang-gliding sport, pilots are suspended with the belt attached to the circumference of the glider and they are guided by the movements of this belt back and forth and by changing the direction of the glider. The pilot's speed control and turns can be carried out safely as a result of the trainings they receive on flights with a speed of approximately 130 km/h [6].

In this study, which focuses on issues such as virtual hang-gliding application and tourism related issues, the future location of this application, the adaptation of the virtual hang-gliding application to the real world and its relationship with tourism substitutions, many new perspectives are given for future research (Figure 1).

Virtual hang-gliding application from tourism perspective

Looking at the tourism industry, customers' expectations and wishes are basically buying experience. Tourists want to leave the routine in their lives and have new excitements and experiences. Touristic enterprises can apply to many different marketing methods with the development of technology in order to meet the demands of tourists and to make their destinations and products attractive (Figure 2).

The impact of virtual reality on tourism may differ as much as technology, according to the costs and attitudes of the society. It is important that in the next stage it becomes more desirable than acceptability. What is important at this point is whether these practices will support or deter tourism movements [7]. According to Umberto [8], technology related to artificial experiences can provide a similar experience for us to ask for the real experience, or it may offer a better experience than we would like to have.

Tourists want to know about them before purchasing their activities. Today, it is possible to say that it is much easier to achieve this through internet technology. The tourists will be informed of the comments and experiences via the internet about the hotel they

Figure 2: Virtual hang-gliding application. **Source:** Virtual reality- hang gliding simulator, (2020).

will visit, the transportation method they will travel, the sportive, cultural activities they will do [9].

A large number of hotels, travel companies and leisure activities companies can offer virtual reality applications related to the experiences they will experience with the applications they use on their websites. For example; hotels offer their rooms, destinations are tourist attractions, alternative tourism businesses their activities.

The type of tourism that tourists participate to physically force themselves is called adventure tourism. While these activities can take place in remote or more undiscovered areas in general, there are generally more difficult and easier types. The challenging types of adventure tourism are unique and exciting, while outdoor activities such as rock climbing and mountaineering, suspending, diving, rafting and sailing wing can be included, while the easier ones include activities such as bird watching, hot air balloon rides and cycling [10].

Since tourism is a dynamic industry, it is necessary to keep up with the changes in order to maintain competition in tourism activities [11]. Today, with the developing technology, tourists use their mobile devices before, during and after their travels, making it necessary to integrate with technology.

Tussyadiah et al. [12] stated that virtual reality can be a good alternative for visiting endangered areas and this can be an ideal method for sustainable tourism. Most museums around the world have started to provide interactive virtual experience opportunities to their visitors. For example, the Salvador Dali Museum allows visitors to visit the museum virtually and view the paintings [13].

In their work, Tom et al. [14] emphasized the importance of researching personal user needs before implementing virtual reality applications in the field of tourism. Virtual tours are becoming very popular as the Internet allows users to access remote content. Today it is possible to visit cities, museums and exhibitions around the world virtually. The use of 360-degree cameras is very common to make the user see an environment, but virtual reality usage rates are growing, bringing more freedom of movement.

Soarez et al. [6] Based on the fact that hang-gliding activity, which is popular in Rio de Jenerio, cannot be experienced by some people as dangerous and scary, they have published a study that

Figure 1: Hang-gliding. **Source:** The thrills of hang gliding, (2012).

requires those who want to make a tour in the city with a hang-gliding application where the city is visualized with virtual reality. According to the researchers, this application will overcome the fears of the users, reduce the risks and solve the problems related to lack of trust, and at the same time, it can be seen as an educational opportunity and encourage people to use hang-gliding in real life.

Gonzalez et al. [15] who they systematically examined Tripadvisor comments to understand the potential impact of VR technology, which is used in the city of Seville and Barcelona in Spain, on the tourist experiences and concluded that the tourists created positive opinions about the destination image as a result of these experiences.

In another study evaluating tourism and VR applications in general, it is predicted that these applications can be a very effective marketing method for tourism, they can attract tourists to destinations more effectively, and this level will increase in the future even though the level of tourist demand is lower than the size of the market for now [16].

The aim of this study is to evaluate the virtual reality applications that people use for tourism purposes in terms of hang-gliding sport. It is aimed to determine the advantages, disadvantages, weaknesses and threats of virtual hang-gliding applications.

MATERIALS AND METHODS

The paper is based on secondary data. The data and information have been collected and examined mainly from different published articles and reports. In this study, we searched the literature review in this area through google scholar, Scopus and online sources and the SWOT analysis was made by evaluating the collected information. SWOT analysis (Table 1) was conducted in order to see the position of virtual hang-gliding applications in the sector in terms of tourism, to understand its strengths, weaknesses, and to understand the opportunities and threats it poses. SWOT analysis involves the process of collecting and disclosing information about internal and external factors that affect or may affect an activity [17]. Stacey [18] defines SWOT analysis as a list of opportunities and threats as well as the strengths and weaknesses identified with the analysis of an organization's resources and capacity. In

this direction, organizations should develop their strengths with opportunities, eliminate threats that may arise and try to remove their weaknesses in the face of future conditions.

Research has shown that virtual hang-gliding applications can provide people with knowledge and experience about this activity and can be effective in removing the existing fear and question marks and can take part in the marketing and promotion of the skipped destination. For example; Fethiye hang-gliding sports in Turkey is carried out. The same ambiance can be presented to users with the virtual reality application. Thus, users affected by the activity will be able to increase the demand for this destination. However, contrary to this situation, people who do not have the opportunity to change places consider this application as a fun leisure activity. Unlike the actual sailing wing application, virtual hang-gliding is an activity that can be attended by people unprepared since it does not require any special training.

Using VR in hang-gliding sports may bring some disadvantages in terms of tourism. The most important of these is that some requests such as seeing and feeling, which are the basis of touristic activities, cannot be satisfied in these activities. Accordingly, there will be no social interaction with local people and other people due to the tourist who cannot visit the destination where the activity takes place. Therefore, by not spending in destinations, there will be a decrease in revenues of both tourism businesses and businesses that indirectly generate income from tourism.

When virtual hang-gliding is evaluated in terms of tourism, it presents some opportunities for the sector. It will contribute to the experience of people who cannot visit the destination where the activity takes place due to language, bureaucratic procedures and security problems, or who cannot participate in such an activity because of their old age and disability [19-23]. It may be an alternative tourism activity in terms of sustainability of tourism [24].

There are some threats that virtual hang-gliding application poses to tourism. These; The users participating in this activity do not need any more, they give up their desire to visit the destination, the technological problems that will be experienced during the application leave the impression by leaving a bad impression, preventing the development of social relations in the destinations,

Table 1: SWOT analysis of virtual hang-gliding applications in tourism.

STRENGTHS	WEAKNESSES
1. Convince tourists who are afraid of activities such as hang-gliding to travel. 2. Virtual hang-gliding application is an effective leisure activity for people who do not have time. 3. Virtual hang-gliding application does not require training. 4. Assisting in promoting and marketing Virtual hang-gliding application related destinations. 5. Virtual hang-gliding application offers tourists the opportunity to experience before buying.	1. The desire of people to touch and feel may decrease the interest in these activities. 2. It is an activity away from the local people. 3. The cost of Virtual hang-gliding application is high. 4. Destinations have an income reducing effect. Reduces destination spending such as souvenirs. 5. Causing psychological and physical disruptions.
OPPORTUNITIES	THREATS
1. Virtual hang-gliding application to be used for training of real flights 2. Applicable for disabled and elderly visitors. 3. Virtual hang-gliding application alternative tourism activity 4. Positive effects on sustainable tourism 5. Virtual hang-gliding application eliminates language, security and bureaucratic problems for visitors	1. The effect of reducing tourism demand 2. Technological problems 3. Preventing the development of social relations in hang-gliding destinations 4. The Z generation is compatible with the lifestyle, so these people reduce their touristic travel rates. 5. Negative effects of Virtual hang-gliding application on tourism sector employment

negatively affecting the employment of tourism and being in line with the Z generation's lifestyle. It can be shown as having negative effects on the desire to see.

RESULTS

With the development of VR technology, entertainment, sports, education, etc. in people's lives using this application in hang-gliding activities, which is one of the sportive aviation activities, has caused many effects in terms of tourism [25].

In this study, the current and future position of the virtual sail wing application and its relations are emphasized. In Table 1, the effects of virtual hang-gliding applications in tourism were analyzed by SWOT analysis, besides the strengths and weaknesses in the sector, the opportunities that could be used for the sector and the threats that would require attention should be emphasized.

Virtual reality technology; It gives people the opportunity to experience such an experience that has not been done before, a place that has not been visited, those who cannot perform these activities due to their elderly, disabled or language problems, lack of financial means and fears. It is a fact that the effect of reducing tourism demand as a threat is a fact. However, integrating VR technology into the products and services produced by the technology, which is one of the latest innovations in the future planning of decision makers, destination organizations and business owners across the country and making the activities attractive with their promotional and marketing activities will reverse this effect. For example, for the Red Courtyard, Zeus Temple, Athena and Asclepius Temples located in Bergama, a trip to the ancient area of 3D has been put into operation and it has been introduced under the title "History is reviving in 3D". Through the applications downloaded to phones in the ruins, tourists are offered the opportunity to make virtual trips in 4 historical areas with 16 different perspectives. With all these applications, "Stevie Awards 2016-International Business Awards", in which many projects in the world participated, won the second place in its category [26].

DISCUSSION

People can have the opportunity to visit the museum, city or exhibition anywhere in the world through the programs provided. Likewise, they may experience some of their sportive applications that they could not do in terms of their fears, time and distance using virtual reality applications. With the development of virtual reality (Virtual Realtiy-VR), various usage applications have already been established in the tourism sector, as in many sectors. As VR technology continues to develop, it can be said that it will be used more in the society in general and especially in the tourism sector. At the same time, although it can be perceived as a threat for the tourism sector, the benefits that tourism researchers and professionals face by this reality and integration of these applications can be achieved by providing integration to the sector [27].

The positive effects of virtual reality applications on the purchases of tourists Dieck, [28] shows that it will be useful to evaluate these applications during the promotion and marketing of the tourist product. The use of virtual Hang-gliding applications during the promotion and marketing of destinations with hang-gliding activities is important in increasing the demand for the region. Tourism enterprises managers, destination management

organizations and institutions and organizations that are authorized for tourism promotions in general should integrate virtual reality into their work.

According to the research of Williams [7] aiming to detect VR usage in the tourism industry and deficiencies in VR technology, there are three main areas in which virtual reality is used in tourism. These areas are; creation of theme parks (Disneyland, etc.), use as a marketing tool (tour operators offering simulated experiences to consumers), and creation of artificial tourism.

Although originally designed for management and marketing purposes [7], consumers are increasingly involved in virtual reality applied tourism activities for hedonic motivations (eg: pleasure, pleasure, flow experience, happiness). According to Tussyadiah et al. [12], entertainment has an important role in VR tourism and the experiences experienced by users with virtual reality reveal the tendency to visit attraction centers.

According to Geng et al., users can choose, visit and experience a virtual tour through the simulation applications of touristic centers, which may create a desire to visit the original place. VR technologies affect potential tourists' travel decisions by eliminating the barrier to learn and predict their destination before making their decision and buying their vacations (Accenture, 2018).

According to Griffin et al. [29,30] VR can help people create more positive emotions towards tourist attractions and has a more positive effect compared to other forms of visual promotion. Marketers should consider using VR instead of pursuing traditional methods to interact with potential visitors and improve their relationship. They stated that virtual reality is an attractive type of advertising that helps people feel like they are in a touristic place. It has been proven that virtual reality applications have many benefits in marketing and promotional applications [31].

In addition, research on the use of virtual reality in tourism is thought to show that tourists exhibit a positive attitude about this issue, especially because the feeling of reality feels like a tourist attraction and it will increase the interest in visiting real touristic places [32].

Using virtual reality applications in the travel and tourism industry can bring momentum in deciding on travel, and accessibility can be an efficient tool to eliminate the gap between what tourists expect and experience exactly [33].

Virtual reality tours affect the decisions of the tourists if the users enjoy the VR experience [34]. One of the main reasons for the use of virtual reality in tourism is the satisfaction it has created [35], Huang et al. [36] found that this experience had a significant impact on the behavioral intentions of VR users for their actual visits.

Virtual reality provides marketers with opportunities to connect with them by providing an experience that allows potential tourists to explore tourism destinations Huang et al. [35] in the comfort of their home before deciding to visit [37]. Jung et al. show that the effective use of VR tourism in cultural heritage destinations provides a common creative value in the pre-visit, on-site and post-visit experience of tourists. In addition, virtual travel can be an important opportunity for disabled and elderly tourists. It is considered as one of the biggest technological innovations of the 21st

century in terms of virtual reality applications, a new distribution channel for tour operators, the integration of conventional theme parks with virtual reality [38-40], and a solution to the accessibility problem for the disabled. It brings advantages such as participation of the elderly in activities, eliminating security and language problems, and no need for bureaucratic ways such as visas [16].

According to the study of Kulakollu et al. [16], in general, the lack of technological infrastructure in underdeveloped and developing countries, biased attitudes about technology, high implementation costs of virtual reality applications for customers, the view that customers may not get real tourism activity of this experience has been reported [41].

All these studies in this area have been evaluated within the scope of the swot analysis. It is seen that the studies carried out are concentrated in areas such as marketing and human behaviors. This makes it difficult to reach more general results within the scope of this research [42].

CONCLUSION

This study is important in terms of its contribution to the literature since the studies in this field include more general approaches and are conducted for a niche area.

Some general conclusions have been reached when all the researchers evaluated;

- Entertainment has an important role in VR tourism,

- Users can choose, visit and experience a virtual tour through the simulation applications of touristic centers. Virtual hang-gliding application offers tourists the opportunity to experience before buying.

- Virtual reality applications have many benefits in marketing and promotional. Assisting in promoting and marketing Virtual hang-gliding application related destinations.

- It brings advantages such as participation of the elderly in activities, eliminating security and language problems, and no need for bureaucratic ways such as visas,

- This experience had a significant impact on the behavioral intentions of VR users for their actual visits.

- Positive effects on sustainable tourism

- The cost of Virtual hang-gliding application is high.

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